



Environmental Planning and Policy Update / Oil and Gas Update

City Council Meeting January 2022



Environmental Update



Policy Update

- Air Quality Monitoring & Grant Application
 - AQ Dashboard
 - Draft AQ Monitoring Plan received and under review
 - EPA grant application will be submitted in March for additional monitoring
- Municipal Sustainability Report
 - Peer Municipal Benchmarking
 - Staff Survey (Vision Statement & Policy Recommendations)
- Environmental Policy Advisory Committee (ECAP)
 - Strategic Planning ECAP meeting held on March 2 to solicit feedback
 - New real time air monitoring dashboard was displayed
- Legislative Update

Air Quality Monitoring

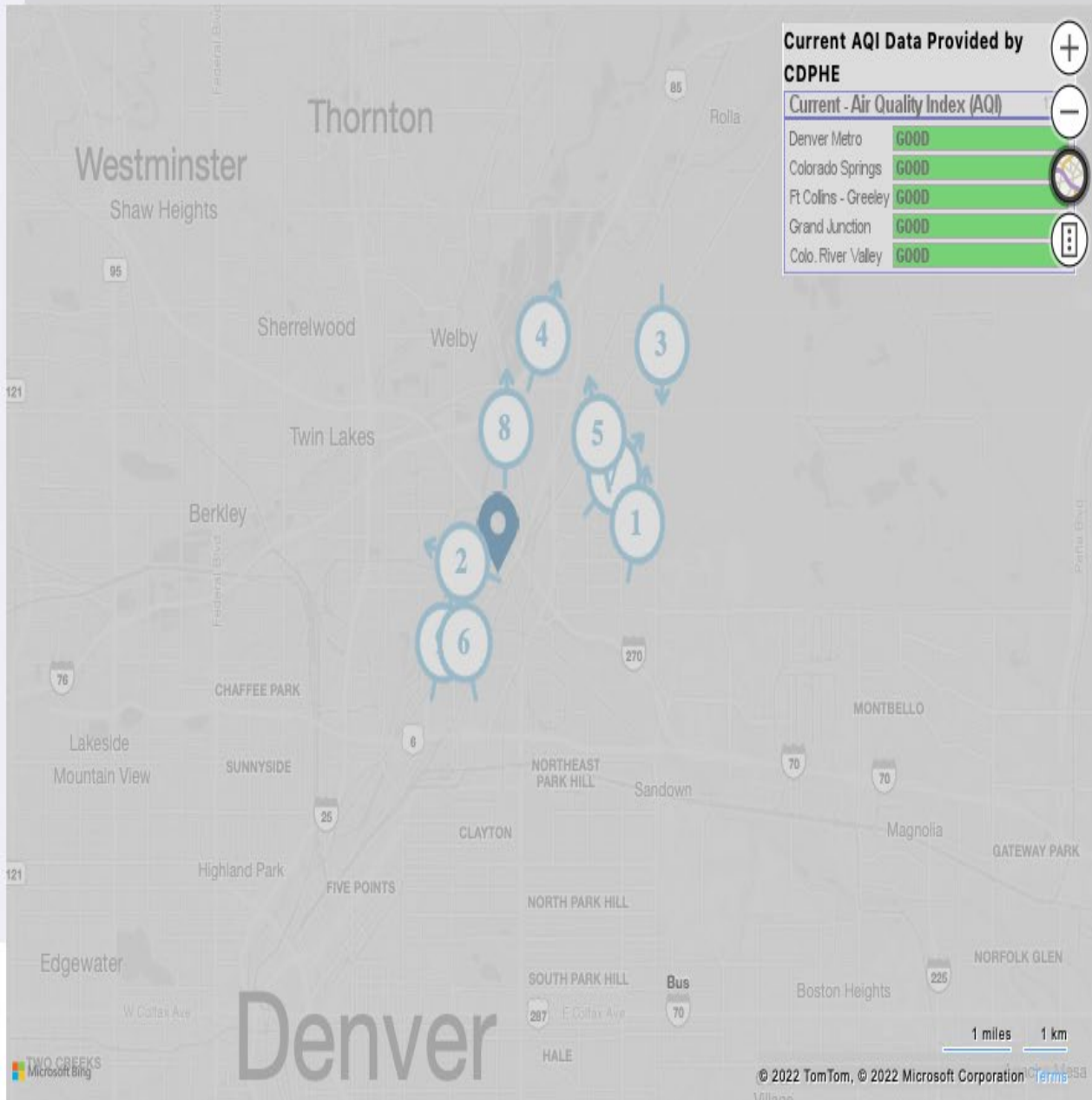
Montrose developed an enhanced air monitoring program for the Commerce City and North Denver communities. Visit [CCND-air.com](https://www.ccnd-air.com) to see air quality information in near real time and data reports.



Air Quality Monitoring

Monitors the following compounds: carbon monoxide (CO), sulfur dioxide (SO_x), hydrogen sulfide, nitrogen oxide, nitrogen dioxide (NO_x), particulate matter (PM), and total volatile organic compounds (VOC).

Quarterly: a mobile monitoring van through neighborhoods capable of detecting VOC such as ethane, propane, benzene, toluene, ethylbenzene, xylene, and hydrogen cyanide an order of magnitude lower than stationary monitors.



Select Compound

Carbon Monoxide (CO)

Carbon Monoxide (CO), one of six U.S. EPA criteria air pollutants, is a colorless, non-irritating, odorless, and is tasteless gas. [Learn More](#)

Potential Sources



Vehicle Exhaust



Forest Fire



Power Plants



Industrial Sources



Wood Burning

Health Based Reference Levels

AEGL: 83 ppm 1-Hour Average [Learn More](#)

NAAQS: 35 ppm 1-Hour Average [Learn More](#)

Date

02/17

Location

1

1 miles 1 km

Compound	Concentration	Last Updated
Carbon Monoxide (CO)	0.3 (ppm)	02/17 12:40 PM
Hydrogen Sulfide (H ₂ S)*	0 (ppb)	02/17 12:40 PM
Nitric Oxide (NO)*	6.3 (ppb)	02/17 12:40 PM
Nitrogen Dioxide (NO ₂)	12.8 (ppb)	02/17 12:40 PM
Particulate Matter 2.5 (PM _{2.5})	5.2 (ug/m ³)	02/17 12:59 PM
Sulfur Dioxide (SO ₂)*	0 (ppb)	02/17 12:40 PM
Total Volatile Organic Compounds (VOCs)	0 (ppm)	02/17 12:59 PM

Air Monitoring Grant

- Purchase air monitors for gap locations not in current network;
- Pollutants targeted include volatile organic compounds (VOCs), particulate matter (PM), and nitrogen oxides (NO_x);
- Real time data and overall air quality index (AQI) alerts
- Targeted emissions mitigations and policies that would be most impactful to its citizens.

Municipal Sustainability

Vision Statement: The City of Commerce City is committed to environmental stewardship and is dedicated to making internal improvements that foster a sustainable future.

Staff Survey:

- Practice a phased implementation to organizational sustainability;
- Concentrate on education, waste diversion and energy efficiency;
- Build internal capacity and develop policies to establish sustainability culture;
- Form Innovation and/or Sustainability Team

Municipal Sustainability

Data from eight entities (Adams County, Anchorage, Fort Collins, Lancaster, New Belgium, Thornton, and Westminster) based on similar demographics and innovative approaches for benchmarking.

Key Findings:

- Start with data collection, goal setting and ranked strategies;
- Dedicated FTE personnel
- Include employee education and incentives; and
- Establish clear data driven metrics by sector (i.e., energy, water).



Legislative Update

- In accordance with HB21-1266, staff is reviewing air pollution grant to address higher PM and other air pollutants levels that remain above other areas in the state. Staff is reviewing SB 21-264 - GHG Reductions from Utilities including (Methane Recovery and Credits) and HB 1238 PUC Modernize Gas Utility Demand Side Management legislation. Staff registered with Clean Heat Plan Technical Working Group (SB 21-264).



Oil and Gas Update



CDPHE Information on Suncor Exceedances (Reporting Period: Dec 20 – Jan 20)

Date	Media Impact	Location	Summary	Exceedance	Permit Limit
12/16/22	Air	Plant I – Hydrogen Unit & Hydrodesulphurization (HDS) Unit	Carbon monoxide release	0.068 lb. of CO per MMBtu for a 24 hr. (average)	0.060 lb. of CO/ MMBtu 24 hr. (average)
12/17/22	Air	Plant 1 Hydrogen Unit and Plant 1 No. 3 Unit (No. 3 HDS). Tier II	During maintenance unit tripped causing excess methane released and subsequent fire.	Reported at 300 ppm (max value) for a 3-hour average.	162 ppm H2S in Plant 1 Flare Gas for a 3-hour average.
1/10/22	Soil	Tank 3801	An overflow of the water draw pan. Personnel collected soil samples (diesel and water). The stained soil area was excavated found and backfilled with clean soil.	1 barrel of diesel/water mix	N/A

CDPHE Information on Suncor Exceedances (Reporting Period: Jan 20 – February 14)

Date/Time:	Media Impact	Location	Summary	Exceedance	Permit Limit
1/25/22 10:00 PM	Air	95OPAD108 - East Plant	Incident is currently under investigation	P2 Flare H2S - 200 ppm (3-hr avg) P2 Fuel Gas H2S - 170 ppm (3-hr avg)	162 ppm H2S in Flare Gas (3-hr avg) 162 ppm H2S in Fuel Gas (3-hr avg)
2/14/22 12:00 PM	Air	P004 - #2 FCCU Regenerator/Reactor	Related to the planned startup of the Plant 2 #2 FCCU after shutting down on 2/09/22, in order to make necessary repairs to the air blower.	2,031 ppm	500 ppm CO at 0% O2 (1-hour avg)

CDPHE Information on Suncor Exceedances (Reporting Period: Feb 14 – Feb 28)

Date/Time	Media Impact	Location	Summary	Exceedance	Permit Limit
2/14/22 10:38	Air	100 - H-25	Under Investigation	PC 20.7 - Sulfur pit emissions vented to atmosphere	PC 20.7 - Emissions from sulfur pit (T2005) are routed to the TGU and vented through the TGU incinerator (H-25) .
2/25/22	Air	Plant I – Flare Gas Recovery Compress System	Sulfur Dioxide release due to leak	500 lbs. of Sulfur Dioxide	AEGL: 200 ppb 1-Hour Average NAAQS: 75 ppb 1-Hour Average**

Acute Exposure Level Guidelines (AEGs)

- AEGs are used as guidance for accidental releases of chemicals into the air. AEGs are expressed as specific concentrations of airborne chemicals at which health effects may occur. They are designed to protect the elderly and children, and other individuals who may be susceptible.
- **AEGs assigned 1, 2 or 3 according to severity of effects**
- AEGs are calculated for five relatively short exposure periods – 10 minutes, 30 minutes, 1 hour, 4 hours, and 8 hours – as differentiated from air standards based on longer or repeated exposures.
- AEG “levels” are dictated by the severity of the toxic effects caused by the exposure, with Level 1 being the least and Level 3 being the most severe.
- All levels are expressed as parts per million or milligrams per cubic meter (ppm or mg/m³) of a substance above which it is predicted that the general population could experience, including susceptible individuals:

Acute Exposure Level Guidelines (AEGs)

Level 1: Notable discomfort, irritation, or certain asymptomatic non-sensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.

Level 2: Irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.

Level 3: Life-threatening health effects or death.

Below AEGL Level 1

- Airborne concentrations below the AEGL-1 represent exposure levels that could produce mild and progressively increasing but transient and non-disabling odor, taste, and sensory irritation or certain asymptomatic, non-sensory effects.
- AEGL values represent threshold levels for the general public. As mentioned, that includes susceptible subpopulations, such as infants, children, the elderly, persons with asthma, and those with other illnesses. However, it is recognized that individuals, subject to unique or idiosyncratic responses, could experience the effects described at concentrations below the corresponding AEGL.

CDPHE Information on Suncor Exceedances



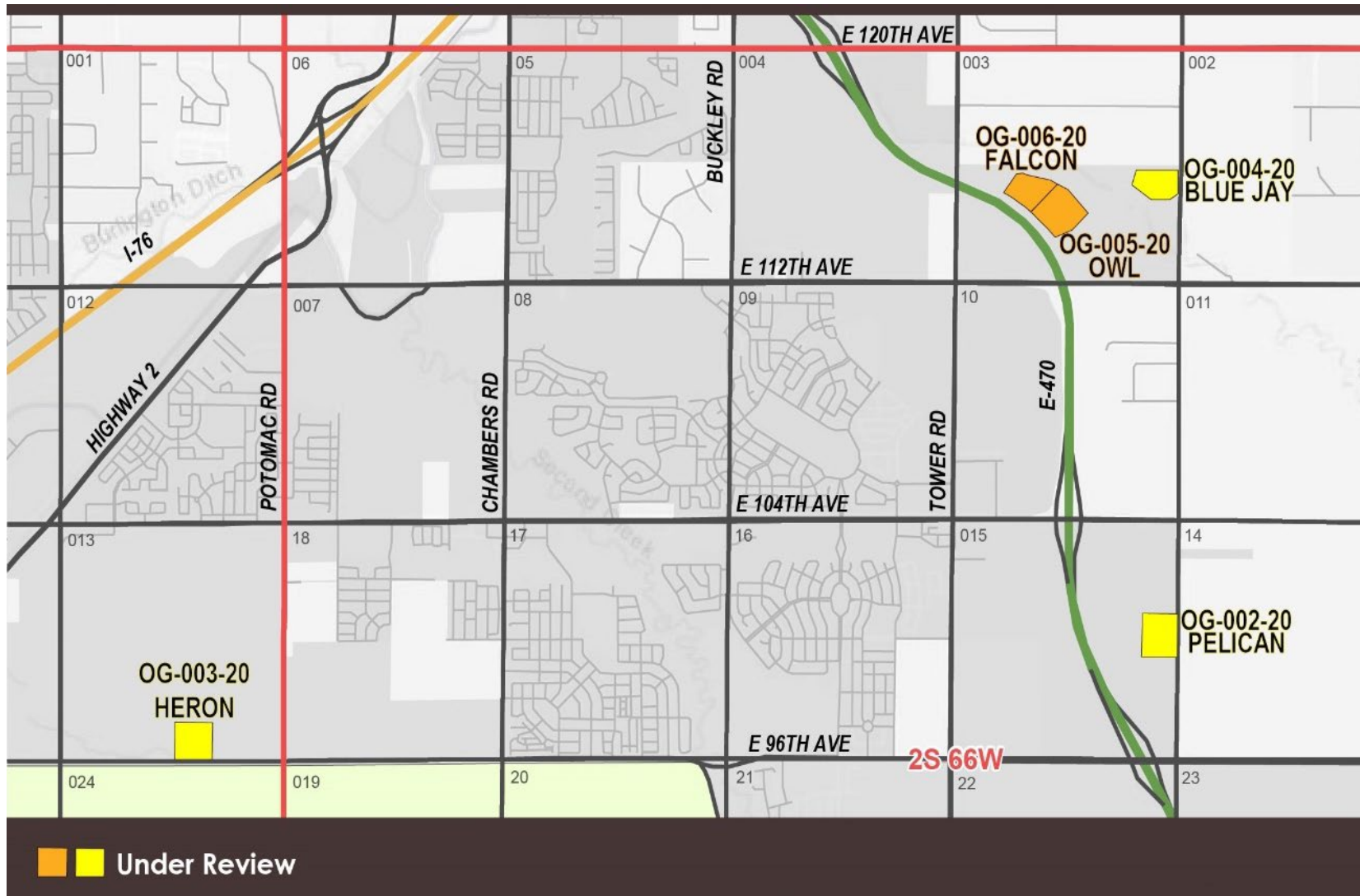
Date	Refinery Impacts	Community Health	Additional Comments
12/16	Clean-up costs	< Acute Health Reference Guidelines	Minor
12/17	No injuries	Monitoring network of sensors within a three-mile radius of the refinery did not detect any levels above the acute health reference guidelines during this event	Minor
1/10	Soil Remediation	Minimal Short – term Impacts	Minor
2/25	Permit Violation at site	> AEGLS at the site but below Health Reference Guideline as of 2/28	Acute Health Concern at site

City Oil & Gas Permit Applications

- Five applications are currently deemed complete and being processed by the city.
- Extraction Oil and Gas, now Civitas Resources, may choose to withdraw the applications for the Owl and Falcon well sites.

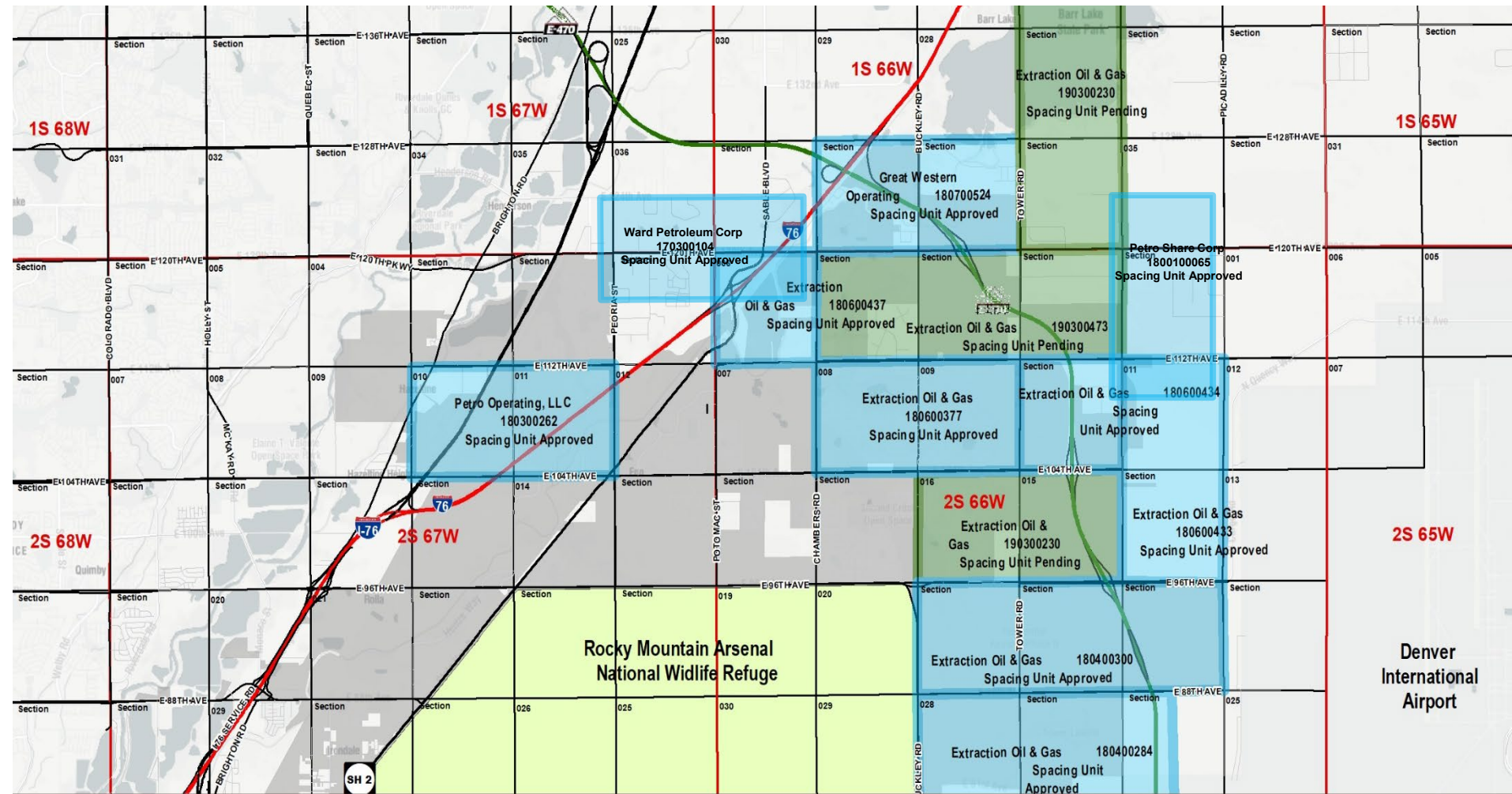
Site Name	Case Number	Operator	Council Action Required	Well Count
Pelican	OG-002-19	Extraction Oil and Gas	Conditional Use Permit	28
Heron	OG-003-19	Extraction Oil and Gas	Conditional Use Permit	24
Blue Jay	OG-004-19	Extraction Oil and Gas	Rezoning	18
Owl	OG-005-19	Extraction Oil and Gas	Rezoning	18
Falcon	OG-006-19	Extraction Oil and Gas	Rezoning	18

City Oil and Gas Permits



Map of COGCC Activity

As of 2/22/2022



Status of State Applications

- Spacing Unit Approved
- Pending Form 2A
- Spacing Unit Pending
- Approved Form 2A
- City Limit Boundaries



0 1,400 2,800 5,600 8,400 11,200 Feet

*This map represents all pending Form 2A applications, and spacing applications that have been submitted by Oil & Gas operators to the COGCC. Approval of a spacing unit by the COGCC does not constitute the ability to drill, unless Form 2's and 2a's within that section are also approved, and a city permit has been issued.



Questions? Comments?

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City Council Meeting March 7, 2022